REMARKS

Applicant request amendment of the application in view of the following comments:

The Office Action

By way of review, claims 2-15 were presented for examination. Claims 4, 5 and 13-15 were noted to be allowed, and claims 6-8 were objected to but were noted to contain allowable subject matter.

Claims 2, 3 and 9-12 stand rejected.

The drawings have been objected to for not supporting claim language of "protection circuitry" in claims 9 and 13.

Response to the Drawing Objections

Applicants respectfully traverse the Examiner's position that claims 9 and 13 are not supported by the drawings. Particularly, the protection circuitry recited in these claims are found by the components 100, 102, 104, 106 and 108 as explained in the specification starting in paragraph 33 on page 12, wherein it is stated, "with further attention to the protection circuitry of HID ballast 10, resistor 100 is placed in series with the source FET 30. Resistors 102 and 104 are formed as a divider network of electrolytic capacitors 94 and 96. The junction between resistors 102 and 104 is connected to one end of zener diode 106. The opposite end of zener diode 106 is connected to the first end of peak detector diode 108, whose opposite end is connected to the junction of resistor 100 and the source of FET 30. The described circuitry is then connected via connection line to an enable pin (pin 8) of integrated circuit 110." As further recited in paragraph 34, "the just described circuitry of HID ballast 10 will protect the circuit against undesirable current and voltage levels whether the circuit is in a start-up phase, a running phase or when a lamp is replaced."

In reviewing the drawings, Applicants did note that reference was made in the specification to a resonant load circuit 36 including a main resonant inductor 44 and a main resonant capacitor 46. Figure 1 did not show the numeral designation "36" of the resonant lamp circuit, and therefore this Figure has been amended (see paragraph 18) and is attached hereto.

For the foregoing reasons, it is respectfully submitted the Figures are now in appropriate form.

The Claims are Allowable Over the Cited Art

Claims 2-15 were presented for examination. At paragraph 5 on page 5 of the

application, the Examiner noted claims 4-5 and 13-15 are allowed, and claims 6-8 contained allowable subject matter.

Claims 2, 3 and 9-12 stand rejected.

Turning to independent claim 2, this claim has been amended to more particularly note the structure which integrates the bridge converter section with the switching section such that the ballast is a single-stage device. Applicant particularly has reviewed Figure 13 of the cited '187 patent and respectfully submits that what is shown there are separate stages of a non-integrated device, wherein the input section 10 is a separate component not integrated to the switching/inverter section 30. Also included in Figure 13 is a separate booster section 20. While they are connected to each other, they are not integrated into a single-stage device. Particularly as noted in the present specification at paragraph 17, the full-bridge diodes 18-24 are operationally connected to the inverter circuit components 28 and 30, as well as being connected to the input power circuit components of input filter section 14. This operational interconnection is at least in part achieved via the two feedback loops (see paragraph 26). Each of the feedback loops, include a capacitor such as resonant capacitor 46 and second feedback capacitor 90. As noted in the specification, second feedback loop, through capacitor 90, is within the lamp current path, and in the first feedback loop which is on the resonant side of the circuit (paragraph 27), current is fed back through the feedback loop with the resonant capacitor 46. Such a design is used to achieve a power balance between the input power and the power delivered to the lamp 38. The balancing of these elements, provide a low THD. The balancing by this design is beneficial due to the integration aspects of the present application not taught or fairly suggested by the '187 patent.

New claims 16-19 have been added to further define the present application. Claims 16 and 17 depend from previously allowed claim 4, and therefore are considered appropriate.

Dependent claims 18 and 19 depend from claim 2. Claim 18 recites that the second feedback loop is within the current path of the lamp. This is not taught or shown by the cited references. Claim 19, which depends from claim 18, further defines that an active switching device is used to control the amount of current fed back to the bridge converter section via the second feedback loop. Again, this is not taught or fairly considered by the cited art.

For the reasons detailed above, it is submitted all claims remaining in the application are now distinguished from the cited art.

CONCLUSION

For the reasons detailed above, claims 2, 4-11 and 13-19 are now in condition for allowance. An early notice to that effect is therefore earnestly solicited.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Mark Svat, at Telephone Number (216) 861-5582.

Respectfully submitted,

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Attachment: Replacement Drawing Sheet, Figure 1
Annotated Marked-up Drawing, Figure 1

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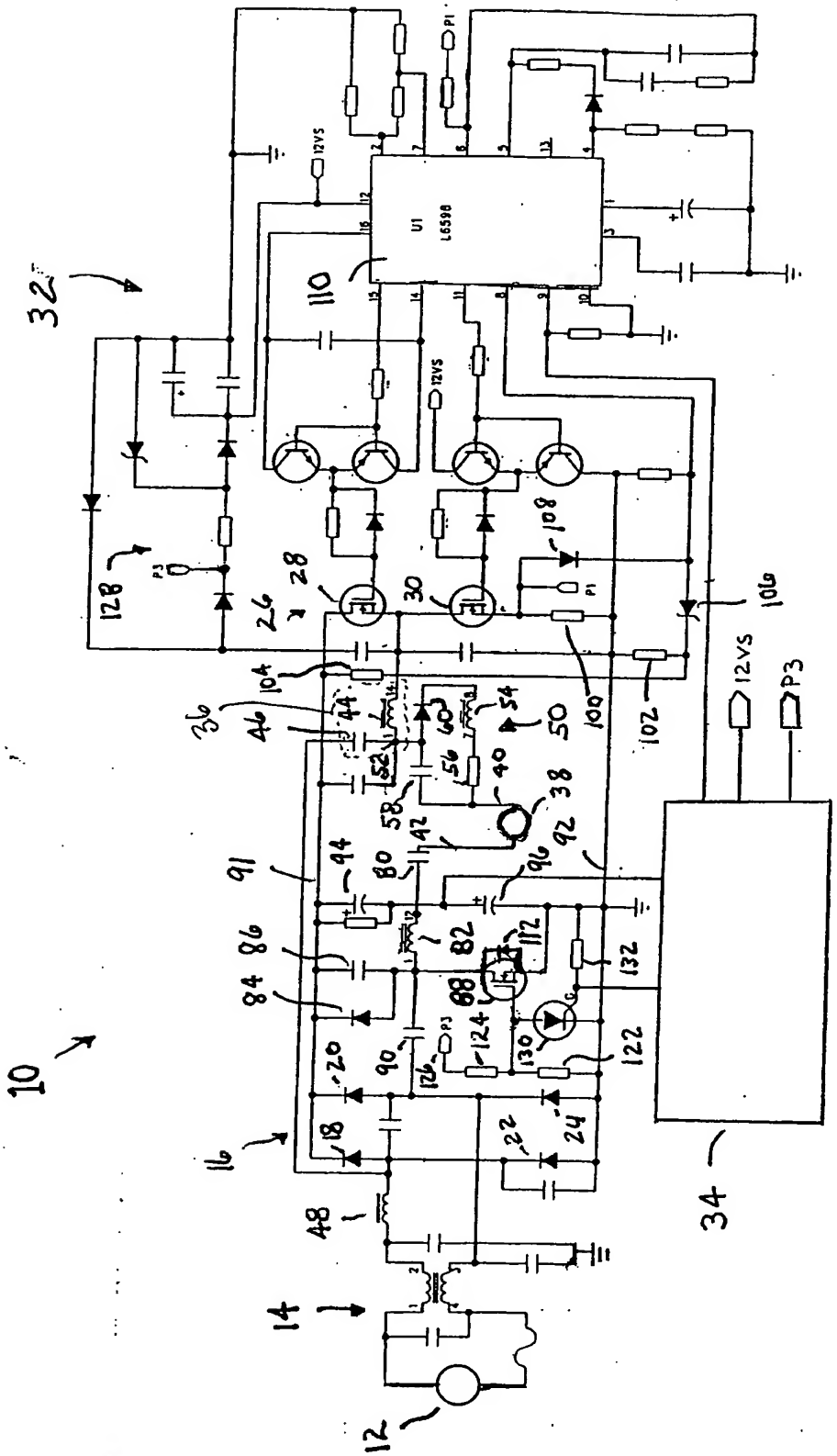

FIGURE 1